STATE OF UTAH
NATURAL RESOURCES & ENERGY
Oil, Gas & Mining

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Cleon B. Feight, Division Director

April 12, 1983

Mr. Robert Ruggeri
Attorney
P.O. Box 310
Moab, Utah 84532

RE: Red Rock Mine Plan Review #2
S & S Mining Company
ACT/037/050
San Juan County, Utah

Dear Mr. Ruggeri:

The Division has completed an inspection of the Red Rock minesite accompanied by members of the State Health Department. Robin Groff and Roy Rockwell met with Division staff members Tom Tetting, Susan Linner, Tom Portle and Pamela Grubaugh-Littig on April 6, 1983. At that time a draft copy of the Division's most recent review of the mine plan was presented to Mr. Groff. Primary concerns at this time centered around construction of an evaporation pond and the development of surety arrangements. It is apparent that in order for operations to proceed lawfully both items need to be taken care of to the satisfaction of the State agency's reviewers.

Suggestions for a rapid and efficient completion of the requested items were offered to both Mr. Rockwell and Mr. Groff in a continuing effort to process the permit application. Soil tests (compaction and permeability) were required to determine if the in-situ Brushy Basin clays could serve as a liner for the no-discharge pond. Drill holes at the proposed pond location and down hill from it were requested to be sealed immediately. Surety arrangements were to be devised and communicated to the Division of Oil, Gas and Mining on April 11, 1983.

On Monday Mr. Groff was contacted and indicated that arrangements were made between Clayton Stocks, T S and R Associates and a certain Moab bank concerning the posting of a surety with the State. Robin Groff indicated that this group would contact the Division with a proposal by Thursday, April 14, 1983. Should this matter remain unsettled it is the understanding of all parties concerned that an Order to Show Cause will be issued for Clayton Stocks to appear before the Board of Oil, Gas and Mining and state why compliance with the Mined Land Reclamation Act has not been achieved.

Please find enclosed a final copy of the latest review of the Mining and Reclamation plan conducted by the Division. A response to complete the questions is requested prior to the initiation of mining activities. If there are any questions please contact our office at your earliest convenience.

Sincerely,

THOMAS N. TETTING
ENGINEERING GEOLOGIST

TNT/lm

cc: Robin Groff
Jim Smith, DOGM
Wayne Hedberg, DOGM
Tom Portle, DOGM
Pam Grubaugh-Littig, DOGM
Susan Linner, DOGM
Steve McNeal, State Health

Enclosure

RED ROCK MINE PLAN REVIEW
S & S MINING
ACT/037/050
San Juan County, Utah

Rule M-3 (3) - DWH

Only a partial response has been provided to the previous questions raised by the Division under this section.

The operator has provided a pencil sketch of the proposed sediment pond with its approximate size and containment volume. If the projected inflow (2 - 3 gpm) from the mine is accurate, then a pond of the size proposed should be adequate to handle the discharges. This is assuming there is no surface runoff routed through the pond and that the sediment storage volume does not become a problem.

Rule M-3 (2)(d) - DWH

The operator states that the pond bottom will not be lined with bentonite. Before this can be considred the operator must demonstrate that the seepage rates of the Brushy Basin clays are less than or equal to those characteristic of the proposed bentonite liner. How thick will the clay liner be? How will the liner be installed?

The dam construction should be revised to provide for a more stable structure. A formula similar to $H+35/5$ (where H is the height of the dam measured from the upstream toe), should be utilized for design purposes.

The embankment slope profiles should also be flattened to a IV:5h combination, with neither slope exceeding IV:2h. Revised designs should be submitted.

Rule M-3 (5)(c) - TNT

All drill holes connected with the operation must be plugged prior to initiation of mining activity and notice provided to the Division.

Rule M-5 - PGL

Surety information is needed as requested in the original review of October 22, 1982. It is expected that the Division's estimates, already provided, will be verified at the meeting scheduled to be held on April 6, 1983 and surety submitted to the Division during the month of April. (Revision of mine plan life is expected.)

Rule M-10 (6)(12) - TLP

The operator commits to sampling of the waste rock pile for both "nutrient deficiencies and toxicity prior to reclamation and to submit these findings to

DOGM." Tests shall be performed for potential toxicity. The applicant must elaborate on this point before DOGM can sign off on this comment. The operator must sample soil test pits prior to pond construction. Tests to be run should include electrical conductivity (EC), sodium aborbtion ration (SAR) and pH. Sampling is to be done by depth (each 1 foot). The purpose of this sampling is to identify any toxic or inhibitory layers prior to stripping soil.

Topsoil Protection

What methods will be employed to protect the stored topsoil. Will it be seeded. If berms or ditches are not necessary to protect it from erosion please explain why not. If it has been seeded what mix was used and how effective is the cover? Are there any signs of erosion? Provide a map showing exact location(s).

Of new topsoil stockpiles (incident to evaporation pond development) give the slopes and depths of stockpiles as well as proposal methods of protection.

Soil Redistribution

No soil analysis has been provided. Since soils will be stored for a minimum of 8 years (if "no new reserves are encountered") it is likely that the fertility of this material will change during this period. To maximize the probability of successful revegetation the applicant should commit to testing these soils prior to soil redistribution. Tests should include, but not be limited to; ph, soil texture, electrical conductivity, sodium absorbtion ratio, available nitrogen, phosphous, potassium, sodium, calcium and magnesium. This will aid in planning for any necessary soil amendments. The applicant must commit to this analysis and fertilization program. How will soil once redistributed be prepared for seeding? Will it be disked, harrowed etc.?

What equipment will be used for redistribution? At what time of the year will redistribution occur?

Volume

The applicant offers that 6 acres of road use predisturbed to account for the topsoil volume discrepancy.

If this is the case he should elaborate on road reclamation techniques including: fertilization, seedbed preparation disking, ripping, harrowing and mulching. The applicant states 6 - 12 inches of soil will be redistributed. He should provide a more precise commitment based on acreage and topsoil volume. This must be updated to reflect conditions at the evaporation pond development site.

Rule M-10 (8) - DWH

The section was not addressed by the operator.

A commitment to size all surface drainage control structures (ditches, diversions, etc.) to meet a 10 year, 24 hour design storm should be provided. The location of these structures must be provided on the maps as well.

Rule M-10 (11) - DWH

The operator must provide an approval letter from the Division of Environmental Health, Bureau of Water Pollution Control pursuant to the design of the sedimentation pond. The NPDES permit number should also be provided if required by the agency.